

1. (currently amended) A threadless knock sensor, comprising:

a sleeve;

a transducer disposed around the sleeve;

a load washer disposed around the sleeve adjacent to the transducer;

a frusto-conical disk spring disposed around the sleeve adjacent to the load washer; and

a threadless means for compressing the disk spring against the load washer, wherein the threadless means comprises: a flared end formed by the sleeve above the load washer, the disk spring being installed in compression between the flared end of the sleeve and the load washer.

2. (canceled)

3. (currently amended) ~~The knock sensor of Claim 1,~~ A threadless knock sensor, comprising:

a sleeve;

a transducer disposed around the sleeve;

a load washer disposed around the sleeve adjacent to the transducer;

a frusto-conical disk spring disposed around the sleeve adjacent to the load washer; and

a threadless means for compressing the disk spring against the load washer wherein the threadless means comprises: a spring retention collar press fitted around the sleeve above the load washer, the disk spring being installed in compression between the spring retention collar and the load washer.

4. (original) The knock sensor of Claim 1, further comprising:

a lower terminal disposed around the sleeve beneath the transducer; and

an upper terminal disposed around the sleeve above the transducer.

5. (original) The knock sensor of Claim 4, further comprising:
a lower insulator disposed around the sleeve beneath the lower terminal; and
an upper insulator disposed around the sleeve above the upper terminal.
6. (original) The knock sensor of Claim 5, further comprising:
a housing surrounding the sleeve, the transducer, the terminals, the insulators, and the disk spring.
7. (original) The knock sensor of Claim 6, wherein the housing is molded from plastic.
8. The knock sensor of Claim 7, wherein the disk spring is formed with holes to allow molten plastic to flow therethrough.
9. (original) The knock sensor of Claim 2, wherein the disk spring defines an inner periphery formed with at least one slit therethrough.
10. (original) The knock sensor of Claim 9, wherein the slit is angled with respect to vertical.
- 11-21 (canceled)
22. (original) A method for making an engine knock sensor, comprising the acts of:
providing a sleeve having a flared end, the flared end defining a first spring retention face;
disposing a transducer on the sleeve;

disposing a load washer on the sleeve above the transducer, the load washer forming a second spring retention face;

disposing a disk spring on the sleeve above the load washer, the disk spring contacting the second spring retention face; and

compressing the disk spring until it engages the first spring retention face.

23. (original) The method of Claim 22, further comprising the act of:
molding a housing around the sleeve, transducer, the load washer, and the disk spring.
24. (original) A method for making an engine knock sensor, comprising the acts of:
providing a sleeve, the sleeve forming a collar stop face;
disposing a transducer on the sleeve;
disposing a load washer on the sleeve above the transducer;
disposing a disk spring on the sleeve above the load washer; and
pressing a spring retention collar on the sleeve above the disk spring until the spring retention collar engages the collar stop face and the disk spring is compressed.
25. (original) The method of Claim 24, further comprising the act of:
molding a housing around the sleeve, transducer, the load washer, and the disk spring.
26. (canceled)
27. (new) The knock sensor of Claim 3, wherein the disk spring is formed with holes to allow molten plastic to flow therethrough.

28. (new) The knock sensor of Claim 3, wherein the disk spring defines an inner periphery formed with at least one slit therethrough.

29. (original) The knock sensor of Claim 28, wherein the slit is angled with respect to vertical.